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510(k) Summary

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Name of Firm:	Synthes Spine 1302 Wrights Lane East West Chester, PA 19380
510(k) Contact:	Heather Guerin Senior Regulatory Affairs Specialist Telephone: 610-719-5432 Facsimile: 610-719-5102 Email: guerin.heather@synthes.com
Date Prepared:	June 28, 2012
Trade Name:	Synthes Matrix System
Classification:	21 CFR 888.3070 –Pedicle screw spinal system Class III Orthopaedic and Rehabilitation Devices Panel Product Code: NKB, MNH, MNI, KWQ, KWP
Predicates:	Synthes USS, K963045 Synthes Click'X, K992739 Synthes Click'X, K031175 Synthes USS Illiosacral and Polyaxial, K082572 Synthes Matrix System, K092929 Synthes Matrix System, K093668 Synthes Matrix System, K100952 Synthes Matrix System, K100634 Medtronic CD Horizon, K113529 EBI/Biomet Polaris, K111957 Aesculap S4, K112551 Synthes USS, K111358 Synthes MIRS, K113044 Synthes USS, K113149
Device Description:	This is an addition to Synthes' existing non-cervical spinal fixation devices intended for are non-cervical spinal fixation devices intended for posterior pedicle screw fixation (T1-S2/ilium), posterior hook fixation (T1-L5), or anterolateral fixation (T8-L5). The current system is comprised of monoaxial and polyaxial screws, rods, locking caps, transverse bars and connectors. The additional locking cap in this submission is manufactured of cobalt chrome (Cobalt- 28Chromium – 6Molybdenum per ASTM F1537 – 08).
Intended Use/ Indications for Use:	The Synthes USS are non-cervical spinal fixation devices intended for posterior pedicle screw fixation (T1-S2/ilium), posterior hook fixation (T1-L5), or anterolateral fixation (T8-L5). Pedicle screw fixation is limited to skeletally mature patients with the exception of the Small Stature USS, which includes small stature and pediatric patients. These devices are indicated as an adjunct to fusion for all of the following indications: degenerative disc disease (defined as discogenic back pain with degeneration of the disc confirmed by

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	history and radiographic studies), spondylolisthesis, trauma (i.e., fracture or dislocation), deformities or curvatures (i.e., scoliosis, kyphosis, and/or lordosis, Scheuermann's Disease), tumor, stenosis, and failed previous fusion (pseudoarthrosis). When treating patients with Degenerative Disc Disease (DDD), transverse bars are not cleared for use as part of the posterior pedicle screw construct. When used with the 3.5 mm/6.0mm parallel connectors, the Synthes USS 6.0 mm rod systems can be linked to the CerviFix 3.5mm Systems. In addition, when used with 3.5 mm/5.0mm parallel connectors, the Synthes Small Stature USS can be linked to the CerviFix 3.5mm Systems. When used with the 5.0 mm/6.0mm parallel connectors, the Synthes Small Stature USS can be linked to the Synthes USS 6.0 mm rod systems. When used with the 5.5 mm/6.0mm parallel or extension connectors, Synthes USS 5.5 mm rod systems can be linked to the Synthes USS 6.0 mm rod systems. 5.5 mm/5.5mm parallel or extension connectors can be used to link all Synthes USS 5.5 mm rod systems to one another. 6.0 mm/6.0mm parallel or extension connectors can be used to link all Synthes USS 6.0 mm rod systems to one another. Rod-to-rod connectors can be used to link all Synthes USS 5.5 mm rod systems to one another. When used with the 3.5 mm/6.0mm and 4.0 mm/6.0mm tapered rods, the Synthes USS 6.0 mm rod systems can be linked to the CerviFix 3.5 mm and 4.0 mm Systems, respectively. When used with the 3.5 mm/5.5mm and 4.0 mm/5.5 mm tapered rods, Synthes USS 5.5 mm rod systems can be linked to the CerviFix 3.5 mm and 4.0 mm Systems, respectively. When used with the 5.5 mm/6.0mm tapered rods, the Synthes USS 6.0 mm rod systems can be linked to Synthes USS 5.5 mm rod systems. In addition, Synthes USS 6.0 mm rod systems can be interchanged with all USS 6.0 mm rods and transconnectors except Synthes 6.0 mm cobalt-chromium-molybdenum alloy and titanium grade 3 rods, which can only be used with Pangea. Synthes USS 5.5 mm rod systems can be interchanged with all USS 5.5 mm rods and transconnectors. Synthes USS • 6.0 mm Rod Systems: USS Side-Opening, USS Dual-Opening, USS VAS variable axis components, USS Fracture, Click'X,

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	Click'X Monoaxial, Pangea, Pangea Monoaxial, USS Polyaxial, USS Iliosacral, ClampFix • 5.5 mm Rod System: Matrix, MIRS • 5.0 mm Rod System: USS Small Stature CerviFix • 3.5 mm Rod Systems: CerviFix, Axon, Synapse • 4.0 mm Rod System: Synapse
Comparison of the device to predicate device(s):	Synthes Matrix is substantially equivalent to the above-mentioned predicates in design, function, material and intended use.
Performance Data (Non-Clinical and/or Clinical):	*Non-Clinical Performance and Conclusions:* Bench testing results demonstrate that Synthes Matrix performs equivalently or superiorly to the above-mentioned predicates in static compression bending, static torsion, and dynamic compression bending (in accordance with ASTM F1717-11a). *Clinical Performance and Conclusions:* Clinical data and conclusions were not needed for this device.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
10903 New Hampshire Avenue
Document Control Room –WO66-G609
Silver Spring, MD 20993-0002

Synthes Spine
% Heather Guerin, Ph.D.
Senior Regulatory Affairs Specialist
1302 Wrights Lane East
West Chester, Pennsylvania 19380

Re: K120838
Trade/Device Name: Synthes Matrix System
Regulation Number: 21 CFR 888.3070
Regulation Name: Pedicle screw spinal system
Regulatory Class: Class III
Product Code: NKB, MNH, MNI, KWQ, KWP
Dated: June 28, 2012
Received: June 29, 2012

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Dear Dr. Guerin:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you; however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical

device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm.

Sincerely yours,

Mark N. Melkerson
Director
Division of Surgical, Orthopedic
and Restorative Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

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Indications for Use Statement

510(k) Number: K120838
Device Name: Synthes Matrix System

The Synthes USS are non-cervical spinal fixation devices intended for posterior pedicle screw fixation (T1-S2/ilium), posterior hook fixation (T1-L5), or anterolateral fixation (T8-L5). Pedicle screw fixation is limited to skeletally mature patients with the exception of the Small Stature USS, which includes small stature and pediatric patients. These devices are indicated as an adjunct to fusion for all of the following indications: degenerative disc disease (defined as discogenic back pain with degeneration of the disc confirmed by history and radiographic studies), spondylolisthesis, trauma (i.e., fracture or dislocation), deformities or curvatures (i.e., scoliosis, kyphosis, and/or lordosis, Scheuermann's Disease), tumor, stenosis, and failed previous fusion (pseudoarthrosis).

When treating patients with Degenerative Disc Disease (DDD), transverse bars are not cleared for use as part of the posterior pedicle screw construct.

When used with the 3.5 mm/6.0mm parallel connectors, the Synthes USS 6.0 mm rod systems can be linked to the CerviFix 3.5mm Systems. In addition, when used with 3.5 mm/5.0mm parallel connectors, the Synthes Small Stature USS can be linked to the CerviFix 3.5mm Systems. When used with the 5.0 mm/6.0mm parallel connectors, the Synthes Small Stature USS can be linked to the Synthes USS 6.0 mm rod systems. When used with the 5.5 mm/6.0mm parallel or extension connectors, Synthes USS 5.5 mm rod systems can be linked to the Synthes USS 6.0 mm rod systems. 5.5 mm/5.5mm parallel or extension connectors can be used to link all Synthes USS 5.5 mm rod systems to one another. 6.0 mm/6.0mm parallel or extension connectors can be used to link all Synthes USS 6.0 mm rod systems to one another.

Rod-to-rod connectors can be used to link all Synthes USS 5.5 mm rod systems to one another.

When used with the 3.5 mm/6.0mm and 4.0 mm/6.0mm tapered rods, the Synthes USS 6.0 mm rod systems can be linked to the CerviFix 3.5 mm and 4.0 mm Systems, respectively. When used with the 3.5 mm/5.5mm and 4.0 mm/5.5 mm tapered rods, Synthes USS 5.5 mm rod systems can be linked to the CerviFix 3.5 mm and 4.0 mm Systems, respectively. When used with the 5.5 mm/6.0mm tapered rods, the Synthes USS 6.0 mm rod systems can be linked to Synthes USS 5.5 mm rod systems.

Prescription Use X (21 CFR 801 Subpart D)	AND / OR	Over-the-Counter Use (21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE – CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

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(Division Sign-Off)
Division of Surgical, Orthopedic, and Restorative Devices

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In addition, Synthes USS 6.0 mm rod systems can be interchanged with all USS 6.0 mm rods and transconnectors except Synthes 6.0 mm cobalt-chromium-molybdenum alloy and titanium grade 3 rods, which can only be used with Pangea. Synthes USS 5.5 mm rod systems can be interchanged with all USS 5.5 mm rods and transconnectors.

Synthes USS

- 6.0 mm Rod Systems: USS Side-Opening, USS Dual-Opening, USS VAS variable axis components, USS Fracture, Click'X, Click'X Monoaxial, Pangea, Pangea Monoaxial, USS Polyaxial, USS Iliosacral, ClampFix
- 5.5 mm Rod System: Matrix, MIRS
- 5.0 mm Rod System: USS Small Stature

CerviFix

- 3.5 mm Rod Systems: CerviFix, Axon, Synapse
- 4.0 mm Rod System: Synapse

Prescription Use X **AND / OR** **Over-the-Counter Use**
(21 CFR 801 Subpart D) **(21 CFR 801 Subpart C)**

(PLEASE DO NOT WRITE BELOW THIS LINE – CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

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